UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,552	04/23/2001	Gebhard Dopper	GR 98 P 3829 P	4822

7590 12/19/2002

LERNER AND GREENBERG, P.A.
PATENT ATTORNEYS AND ATTORNEYS AT LAW
Post Office Box 2480
Hollywood, FL 33022-2480

EXAMINER
MARKHAM, WESLEY D

ART UNIT	PAPER NUMBER
1762	13

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk 13

Office Action Summary	Application No. 09/840,552	Applicant(s) DOPPER, GEBHARD	
	Examiner Wesley D Markham	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *24-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of applicant's amendment C, filed as paper #12 on 10/15/2002, in which the specification of the instant application was amended, and Claims 1, 4 – 6, and 14 were amended. Claims 1 – 29 are currently pending in U.S. Application Serial No. 09/840,552, with Claims 24 – 29 standing withdrawn from further consideration as being drawn to a non-elected invention, and an Office Action on the merits follows.

Election/Restrictions

2. Applicant's election, with traverse, of Group I, Claims 1 – 23, in Paper No. 12 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

3. The objection to the drawings, set forth in paragraph 5 of the previous Office Action (i.e., the non-final Office Action, paper #7, mailed on 6/19/2002), is withdrawn in light of applicant's amendment C.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The rejection of Claims 1 – 23 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, set forth in paragraphs 8 and 10 of the previous Office Action, is withdrawn in light of applicant's amendment A. Specifically, it is now clear that the "frequency" referred to in the claims is the switching frequency of a switch connecting the base body to a reference potential.

6. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Specifically, the term "few" in Claim 4 is a relative term which renders the claim indefinite. The term "few" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear what the applicant intends the claim to encompass by reciting "...from a few Hz to a few MHz" (i.e., how many is a few?) In the response filed on 10/15/2002, the applicant argues that a common understanding of the term "a few" is "at least three" and that when read with this meaning, Claim 4 is definite. In response, the examiner disagrees. Even if one skilled in the art interpreted the term "a few" to require "at least three", the upper limit of the term "a few" is still vague and indefinite. For

example, is ten (10) "a few"? Is one hundred (100) "a few"? No guidance is given in this respect, and therefore the scope of Claim 4 is unclear, rendering the claim vague and indefinite.

8. Claim 5 recites the limitation "the switching frequency" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1 – 12, 14 – 16, and 18 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey et al. (GB 1 447 754 A) in view of Matthews (GB 2 323 855 A), and in further view of Welch (USPN 4,209,552) for the reasons set forth in paragraphs 13 – 14 of the previous Office Action.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey et al. (GB 1 447 754 A) in view of Matthews (GB 2 323 855 A), in further view of Welch (USPN 4,209,552), and in further view of Rickerby (USPN 5,652,044) for the reasons set forth in paragraph 16 of the previous Office Action.

12. Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey et al. (GB 1 447 754 A) in view of Matthews (GB 2 323 855 A), in further view of Welch (USPN 4,209,552), and in further view of Frye et al. (USPN 4,380,865) for the reasons set forth in paragraph 18 of the previous Office Action.

Response to Arguments

13. Applicant's arguments filed on 10/15/2002 have been fully considered but they are not persuasive.

14. First, the applicant argues that the alternation of the potential of the substrate by Matthews is used while growing the film in order to control the coating structure, while the applicant's claims require alternation of the potential of the substrate during a heating / cleaning process. In response, this argument is not convincing for the following reasons. First, the examiner does agree with the applicant that Matthews teaches alternating the potential of the substrate while depositing a film. However, Matthews also reasonably suggests that the alternating potential can be utilized before deposition of the coating. Specifically, Matthews teaches that (1) a positive bias can be applied to the conductive substrate before and/or during deposition of the coating in order to subject the substrate to energetic electron bombardment and heat the substrate (page 3, paragraph 2), (2) a negative bias can be applied to the substrate in order for a plasma to sputter-clean the substrate prior to deposition (page 5, paragraph 3, and page 6, paragraph 1), and (3) the foregoing processes can be modified by using a pulsed power supply which alternates

positive, then negative, etc. bias, thereby allowing electron bombardment heating while the sample is positive and ion bombardment while the sample is negative (pages 8 – 9). In addition and importantly, the examiner has not relied on Matthews to teach the alternation of the potential of the substrate during a heating / cleaning process. This limitation is taught by Harvey et al. (see paragraph 13 of the previous Office Action). Matthews has been provided to show a manner in which alternating positive and negative potentials / biases are applied to a substrate in a process / device similar to that of Harvey et al.'s. It appears that the applicant's argument is drawn to the Matthews reference individually. Please note that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

15. Second and regarding Claims 4 – 6, the applicant argues that Harvey et al. teach a switching frequency of about one or two times per minute (i.e., 1/30 Hz), and the claimed switching frequency is approximately 100 times higher than a frequency taught by Harvey et al. The applicant states that this significant difference in frequency is more than a mere optimization of the prior-art systems. In response, the examiner disagrees. Harvey et al. not only teach a switching frequency of about one or two times per minute, but also teach that shorter periods can be used (page 2, lines 98 – 105). In other words, Harvey et al. teach that the switching frequency can vary and be chosen by a purveyor in the art. No upper or lower limits of this

frequency appear to be set by Harvey et al. Therefore, it would have been obvious to one of ordinary skill in the art to optimize the switching frequency through routine experimentation in order to achieve the appropriate heating / cleaning effect desired by Harvey et al. Please note that the applicant has not provided any showing, argument, or evidence of criticality or unexpected results of the claimed switching frequency values when compared to the switching frequency suggested by the prior art. If and when such evidence is provided, the examiner will revisit this issue.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D Markham whose telephone number is (703) 308-7557. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Wesley D Markham
Examiner
Art Unit 1762

WDM
December 18, 2002

SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700